

What is Claimed is:

1 1. A medical ventilation tube for placement in an anatomical
2 structure comprising

3 a hollow tubular shaft having a passage formed therethrough,
4 said hollow tubular shaft being made of a first material having a
5 rigidity to resist bending and maintain said passage in an open
6 condition when said ventilation tube is placed in the anatomical
7 structure; and

8 a flange extending outwardly from said hollow tubular shaft,
9 said flange being made of a second material having a rigidity less
10 than that of said first material to permit said flange to deform in
11 response to contact with the anatomical structure.

1 2. A medical ventilation tube as recited in claim 1 wherein
2 said first material is a polymer having a durometer no greater than
3 about 100 on the Shore A hardness scale and said second material is
4 a polymer having a durometer less than said first material but
5 greater than about 20 on the Shore A hardness scale.

1 3. A medical ventilation tube as recited in claim 2 wherein
2 said first material is a polymer having a durometer of about 90 to
3 about 95 on the Shore A hardness scale.

1 4. A medical ventilation tube as recited in claim 3 wherein
2 said second material is a polymer having a durometer of about 50 on
3 the Shore A hardness scale.

1 5. A medical ventilation tube as recited in claim 4 wherein ~
2 said first and second materials are block copolymers.

1 6. A medical ventilation tube as recited in claim 5 wherein
2 said first and second materials are Styrene-Ethylene/Butylene-
3 Styrene block copolymers.

1 7. A medical ventilation tube as recited in claim 1 wherein
2 said first material is a metal and said second material is a
3 polymer. A

1 8. A medical ventilation tube as recited in claim 1 wherein
2 said hollow tubular shaft has a distal end and said flange is
3 mounted at said distal end of said hollow tubular shaft.

1 9. A medical ventilation tube as recited in claim 8 and
2 further comprising a cylindrical section secured to said distal end
3 of said hollow tubular shaft, said cylindrical section and flange
4 being of integral one-piece construction.

1 10. A medical ventilation tube as recited in claim 9 wherein
2 said cylindrical section and said hollow tubular shaft have
3 substantially the same outer circumference.

1 11. A medical ventilation tube as recited in claim 10 wherein
2 said cylindrical section and said hollow tubular shaft abut one
3 another, and wherein abutting portions of said cylindrical section
4 and said hollow tubular shaft are bonded together.

1 12. A medical ventilation tube as recited in claim 11 wherein
2 a portion of said cylindrical section fits within a recess formed
3 in said hollow tubular shaft.

1 13. A medical ventilation tube as recited in claim 11 wherein
2 a portion of said hollow tubular shaft fits within a recess formed
3 in said cylindrical section.

1 14. A medical ventilation tube as recited in claim 13 and
2 further comprising shrink tubing surrounding said cylindrical
3 section.

1 15. A method of making a medical ventilation tube comprising
2 the steps of

3 forming a hollow tubular shaft from a first material having a
4 rigidity to resist bending and to maintain a passage through the
5 shaft when the ventilation tube is placed in an anatomical
6 structure; and

7 molding a flange onto the hollow tubular shaft using a second
8 material having a rigidity less than that of the first material to



9 permit the flange to deform in response to contact with the
10 anatomical structure.

1 16. A method of making a medical ventilation tube as recited
2 in claim 15 wherein said molding step includes placing the hollow
3 tubular shaft within a mold having a cavity configured to form the
4 flange.

1 17. A method of making a medical ventilation tube as recited
2 in claim 16 wherein said molding step further includes injecting
3 the second material into the mold to fill the cavity and thermally
4 bond with the hollow tubular shaft.

1 18. A method of making a medical ventilation tube as recited
2 in claim 15 wherein said molding step further includes using a
3 polymer having a durometer of about 50 as the second material.

1 19. A method of making a medical ventilation tube as recited
2 in claim 15 wherein said step of forming a hollow tubular shaft
3 includes extruding a continuous length of hollow tubing and cutting
4 the hollow tubing to a predetermined length.

1 20. A method of making a medical ventilation tube as recited
2 in claim 19 wherein said step of forming a hollow tubular shaft
3 further includes using a polymer having a durometer of about 90 to
4 about 95 as the first material.

